

### REMARKS/ARGUMENTS

Minor changes are made to this specification. Claims 12-22 and 32-39 are withdrawn from consideration. Claims 1 and 29 are amended. The support for amendment of claim 1 can be found on page 6, lines 30-34. New claims 40-44 are added. The support for claims 40-42 can be found on page 4, lines 23-28 and pages 8-9. The support for claims 43 and 44 can be found on page 7, lines 19-29. No new matter is introduced. Claims 1-11, 23-31, and 40-44 are pending in the application. Reexamination and reconsideration of the application, as amended, are respectfully requested.

### Objection To The Drawings

The drawings were objected for not showing adapter recited in claim 2 and sensor recited in claim 9. The adapter was shown in the original Figure 2 (reference numeral 34) but was not referred to by its reference numeral in the specification. Applicants amended the specification as shown above to add reference numeral 34 to the description of the adapter.

With respect to the sensor, applicants believe that its detailed drawing is not essential for a proper understanding of the invention. The sensor is a conventional feature described in detail in the specification. In particular, the specification explains on page 7, lines 19-29, how the sensor operates, what types of conventional sensors may be used, and how it should be positioned:

When a vessel is picked up by gripper members 30, the plunger 26 pushes the piston 24 up. When a vessel is to be placed down, pressurized air is applied to the piston 24 to push the plunger down, which in turn pushes the vessel out of the gripping members 30. The movement of the piston can be detected by a sensor 40, which can detect the magnetic field of magnet 28. The sensor may be mounted on the exterior sidewall of the cylinder 22 or on the bottom circular clamp 38 of the adapter. This magnet-sensor combination provides a means of verifying whether a vessel has been picked up or placed down. While a magnet sensor is described in this embodiment, it is

understood that other possible types of sensors may also be utilized. Examples of such a sensor include, but are not limited to, inductive, capacitive and optical sensors.

Thus, according to 37 CFR 1.83, the sensor of the present invention should be illustrated in the drawing in the form of a graphical drawing symbol or a labeled representation (e.g., a labeled rectangular box). Accordingly, applicants added such a schematic representation of the sensor 40 to Figure 2 and amended the specification as shown above to provide a proper reference to the sensor. These amendments overcome Examiner's rejections of the drawings. Corrected drawing sheet in compliance with 37 CFR 1.121(d) is attached.

Claim Rejection Under 35 U.S.C. §102 As Being Anticipated by the U.S. Patent No. 4,492,400:

Claims 1, 23, 25 and 26 are rejected under 35 U.S.C. § 102(b) as being anticipated by U.S. Patent No. 4,492,400 ('400 patent) to Yuda. This rejection is respectfully traversed.

As discussed in the instant specification, the gripper of the present invention has gripping members with spring-like properties, which allow them to deform or deflect when a vessel is inserted therebetween and hold the inserted vessel by friction. (page 6, lines 30-33). Due to their spring-like properties, when vessel is removed, the gripping members return to their original configuration (page 7, lines 1-3). Accordingly, unlike grippers of the prior art, the gripper of the present invention does not require gripping members to be actuated by an external power to cause them deflect, grab a vessel, or return to their original configuration (page 9, lines 26-31).

In the present invention, a piston and plunger are not used to actuate the gripping members. Instead, they are used only to push out a picked vessel from the gripping members (page 4, lines 23-28) and to ensure a correct seating of a vessel

upon disengagement of the gripping members (page 4, line 31 – page 5, line 8). Such an arrangement has been found to provide a number of advantages. For example, the flexible and expandable gripping members of the present invention can hold the vessel with friction without disturbing grabbing or jarring motions of actuated gripper fingers of prior art (page 5, lines 9-16).

The '400 patent does not anticipate instant claim 1. As discussed above, the gripping members of the present invention hold vessels by friction, not by actuation. Nothing in the '400 patent teaches or suggests gripping members that are capable of being deflected when a vessel is inserted therebetween and holding it only by friction (without application of an external power). To the contrary, the '400 patent expressly requires powering gripping fingers for gripping action (column 2, lines 7-9; col. 3, lines 3-6). In fact the Examiner herself correctly observed that, in the '400 patent, "[t]he fingers operate to grip or release the object in response to a power stroke from the piston." (Office Action, page 3, §4). Therefore, claim 1 of the instant application is patentable over the '400 patent.

Similarly, claim 23 is patentable over the '400 patent. Claim 23 is directed to a method of picking and placing vessels and requires "picking up said vessel by moving said gripper assembly towards said vessel such that said *vessel is inserted between said gripping members* and pushing said plunger away, while leaving a *small clearance to allow slight further insertion* of said vessel" and "transferring said vessel as it is *held by said gripping members by friction.*" The quoted limitations of the instant claim 23 and the highlighted language, in particular, are neither taught, nor suggested by the '400 patent.

As explained above, the gripping fingers of the '400 patent do not hold an object by friction but require an external power source, such as piston or plunger, to actuate their movement toward each other. In order to actuate movement of gripping fingers in response to a stroke of the piston, the gripping fingers of the '400 patent are attached to the plunger via bearing members (column 2, lines 1-17;

Figures 3A and 3B). Accordingly, the gripping fingers of the '400 patent move together with the plunger and piston and cannot cause the plunger to be pushed away when an object is gripped, as required by the instant claim 23.

Additionally, claim 23 requires leaving a *small clearance* between vessel and plunger when picking up the vessel and seating the vessel by *further moving the gripper assembly slightly towards a seating* as allowed by the small clearance to ensure that the vessel is correctly seated. This feature is explained on page 8 of the instant specification:

[During the picking step,] the gripper assembly 20 is lowered onto the vessel 10 by a specified distance for insertion of the vessel 10 into the gripping members 30. However, the vessel 10 is not inserted in a maximum possible distance, as a small gap is still left between the lowermost tips of the gripping members 30 and the circular flange 18 of the vessel 10. (page 8, lines 5-9)  
[When the vessel is placed into a new location,] to ensure that the vessel 10 is correctly seated, the gripper assembly 20 is lowered further by a short distance, which is yet far enough to account for any possible gap between the bottom of the vessel 10 and the bottom of a vessel seating at the new location. If there is no such gap or the gap is filled up during the short lowering movement of gripper assembly 20, the vessel 10 is simply inserted a little further into the gripping members 30 which is allowed by the small gap left between the lowermost tips of the gripping members 30 and the circular flange 18 of the vessel 10. This feature *ensures that the vessel 10 is correctly seated down* before it is ejected by the gripper assembly 20, thereby preventing any possible jarring of the vessel 10 or splashing of its content. (page 8, lines 21-31)

Nothing in the '400 patent teaches or suggests a method of picking and placing vessels that ensures correct placement of vessels, much less a method with the vessel seating step described above. Therefore, claim 23 and its dependent claims 25 and 26 are patentable over the '400 patent.

Claim Rejection Under 35 U.S.C. § 102 As Being Anticipated by the U.S. Patent No. 2899,232:

Claims 1, 2, 6, 7 and 23029 are rejected under 35 U.S.C. 102(b) as being anticipated by U.S. Patent No. 2899,232 ('232 patent) to Walter. This rejection is respectfully traversed.

Similarly to the '400 patent, the '232 patent does not anticipate independent claims 1 and 23 or make them obvious. As discussed above, the gripping members of the present invention are not actuated by an external power source but are deflected due to their spring-like properties and as a result of a vessel being inserted therebetween. In the present invention, a piston and plunger are used only to release a picked vessel from the gripping members, not to open and close gripping members. The '232 patent, on the other hand, relies on pneumatic means to control engagement of the bottle chuck jaws with a bottle neck (column 1, lines 19-24). In particular, the jaws of the '232 patent are opened and closed in response to movement of a cam (42) actuated by a spring (33) via a piston assembly (25, 26, 27) (column 2, lines 4 – 7; 13-17; 58-70; column 3, lines 1-12). Also, similarly to the '400 patent, the '232 patent does not teach or suggest a vessel seating step that insures its correct placement. Therefore, claims 1 and 23 and their dependent claims 2, 6, 7, and 24-29 are patentable over the '232 patent.

Claim Rejection Under 35 U.S.C. § 103 As Being Unpatentable Over The '400 Patent In View Of The U.S. Patent No. 4,723,503:

Claims 8 and 9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yuda ('400 patent) in view of U.S. Patent No. 4,723,503 ('503 patent) to Yuda. This rejection is respectfully traversed.

Claims 8 and 9 depend from claim 1 and are patentable over the '400 patent for at least the same reasons as claim 1. The '503 patent cannot remedy the defect of the '400 patent, and is not relied upon by the Examiner for such. The Examiner

cites the '503 patent for teaching means for detecting whether a vessel has been picked up. However, the '503 patent have no teaching whatsoever of gripping members that are capable of being deflected when a vessel is inserted therebetween and holding it by friction. Instead, similarly to the '400 patent, the '503 patent utilizes a piston (11) with a clevis bracket (13) to move gripping fingers (14) (column 2, lines 59-63). The piston is actuated by an external power source (column 3, lines 10-13; Figure 2). Therefore, none of the cited references, either alone or in combination, would have motivated one skilled in the art to arrive at the invention as claimed. Thus, claims 8 and 9 are patentable over a combination of the '400 and the '503 patents.

Claim Rejection Under 35 U.S.C. § 103 As Being Unpatentable Over The '400 Patent Or The '232 Patent In View Of U.S. Patent No. 3,554,594:

Claims 3-5 and 30 are rejected under 35 U.S.C. 103(a) as being unpatentable over the '400 patent or the '232 patent in view of U.S. Patent No. 3,554,594 ('594 patent) to Thoma. This rejection is respectfully traversed.

Claims 3-5 and 30 depend from claims 1 and 23 and are patentable over the '400 patent and the '232 patent for at least the same reasons as claims 1 and 23. The '594 patent cannot remedy the defects of the '400 and the '232 patents, and is not relied upon by the Examiner for such. The Examiner cites the '594 patent for teaching making the grippers out of plastic material and having chamfered bottom ends of the gripper fingers. However, the '594 patent have no teaching whatsoever of gripping members that are capable of being deflected when a vessel is inserted therebetween and holding it by friction. Instead, the '594 patent utilizes pneumatics to flex gripping fingers for picking up a bottle (column 1, lines 34 -40). Therefore, none of the cited references, either alone or in combination, would have motivated one skilled in the art to arrive at the invention as claimed. Thus, claims 3-5 and 30 are patentable over a combination of the '400, '232, and the '594 patents.

Claim Rejection Under 35 U.S.C. § 103 As Being Unpatentable Over The '400  
Patent Or The '232 Patent In View Of The U.S. Patent No. 6,520,315:

Claims 10, 11 and 31 are rejected under 35 U.S.C. 103(a) as being unpatentable over the '400 patent or the '232 patent in view of the U.S. Patent No. 6,520,315 to Sugarman, *et al.* ('315 patent). This rejection is respectfully traversed.

Claims 10, 11, and 31 depend from claims 1 and 23 and are patentable over the '400 patent and the '232 patent for at least the same reasons as claims 1 and 23. The '315 patent cannot remedy the defect of the '400 and the '232 patents, and is not relied upon by the Examiner for such. The Examiner cites the '315 patent for teaching means for mixing the contents of vessel being gripped. However, the '315 patent have no teaching whatsoever of gripping members that are capable of being deflected when a vessel is inserted therebetween and holding it by friction. Instead, the '315 patent utilizes an actuator to move finger portions of the gripper (column 3, lines 40 – 46). Therefore, none of the cited references, either alone or in combination, would have motivated one skilled in the art to arrive at the invention as claimed. Thus, claims 10, 11, and 31 are patentable over a combination of the '400, '232, and the '315 patents.

In view of the foregoing, it is respectfully submitted that the application is in condition for allowance. Reexamination and reconsideration of the application, as amended, are requested.

If for any reason the Examiner finds the application other than in condition for allowance, the Examiner is requested to call the undersigned attorney at the Los Angeles, California telephone number (213) 337-6700 to discuss the steps necessary for placing the application in condition for allowance.


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Reply to Office Action Dated August 24, 2004

PATENT  
1892-174 (81841.0044)

If there are any fees due in connection with the filing of this response, please charge the fees to our Deposit Account No. 50-1314.

Respectfully submitted,  
HOGAN & HARTSON L.L.P.

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**Amendments to the Drawings:**

The attached sheet of drawings includes changes to Fig. 2 and replaces the original sheet including Fig. 2. In Figure2, previously omitted element 40 has been added. Also, the reference numeral 36 that is not used in the specification has been deleted.

Attachment: Replacement Sheet  
Annotated Sheet Showing Changes

Application Serial No. 09/771,471  
 Amendment dated 11/17/04  
 Reply to Office Action dated 08/24/04  
 Annotated Sheet Showing Changes

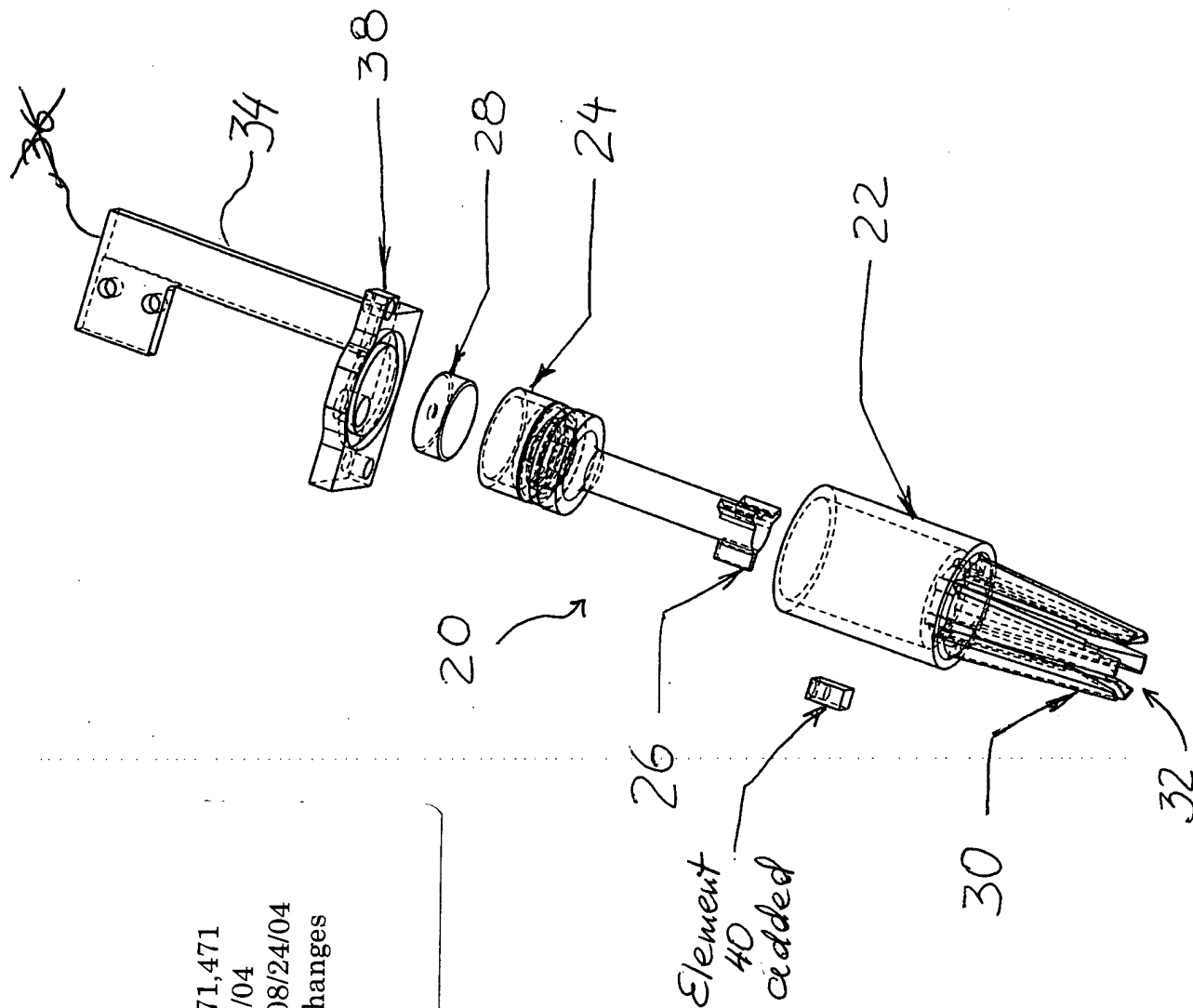


Figure 2